



DEPARTMENT OF THE AIR FORCE  
59TH MEDICAL WING (AETC)  
JOINT BASE SAN ANTONIO - LACKLAND TEXAS

5 JAN 2017

MEMORANDUM FOR 959 CSPS

ATTN: CAPT JOHN HUNNINGHAKE

FROM: 59 MDW/SGVU

SUBJECT: Professional Presentation Approval

1. Your paper, entitled **First Transatlantic Transport on Extracorporeal Life Support for Hypercapneic Respiratory Failure** presented at/published to **2017 Critical Care Congress (Society of Critical Care Medicine Annual Meeting), Honolulu, HI, 21-25 Jan 2017** in accordance with MDWI 41-108, has been approved and assigned local file #17013.
2. Pertinent biographic information (name of author(s), title, etc.) has been entered into our computer file. Please advise us (by phone or mail) that your presentation was given. At that time, we will need the date (month, day and year) along with the location of your presentation. It is important to update this information so that we can provide quality support for you, your department, and the Medical Center commander. This information is used to document the scholarly activities of our professional staff and students, which is an essential component of Wilford Hall Ambulatory Surgical Center (WHASC) internship and residency programs.
3. Please know that if you are a Graduate Health Sciences Education student and your department has told you they cannot fund your publication, the 59th Clinical Research Division may pay for your basic journal publishing charges (to include costs for tables and black and white photos). We cannot pay for reprints. If you are 59 MDW staff member, we can forward your request for funds to the designated wing POC.
4. Congratulations, and thank you for your efforts and time. Your contributions are vital to the medical mission. We look forward to assisting you in your future publication/presentation efforts.

Linda Steel-Goodwin

LINDA STEEL-GOODWIN, Col, USAF, BSC  
Director, Clinical Investigations & Research Support



## PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS

### INSTRUCTIONS

#### USE ONLY THE MOST CURRENT 59 MDW FORM 3039 LOCATED ON AF E-PUBLISHING

1. The author must complete page two of this form:
  - a. In Section 2, add the funding source for your study [ e.g., 59 MDW CRD Graduate Health Sciences Education (GHSE) (SG5 O&M); SG5 R&D; Tri-Service Nursing Research Program (TSNRP); Defense Medical Research & Development Program (DMRDP); NIH; Congressionally Directed Medical Research Program (CDMRP) ; Grants; etc.]
  - b. In Section 2, there may be funding available for journal costs, if your department is not paying for figures, tables or photographs for your publication. Please state "YES" or "NO" in Section 2 of the form, if you need publication funding support.
2. Print your name, rank/grade, sign and date the form in the author's signature block or use an electronic signature.
3. Attach a copy of the 59 MDW IRB or IACUC approval letter for the research related study. If this is a technical publication/presentation, state the type (e.g. case report, QA/QI study, program evaluation study, informational report/briefing, etc.) in the "Protocol Title" box.
4. Attach a copy of your abstract, paper, poster and other supporting documentation.
5. Save and forward, via email, the processing form and all supporting documentation to your unit commander, program director or immediate supervisor for review/approval.
6. On page 2, have either your unit commander, program director or immediate supervisor:
  - a. Print their name, rank/grade, title; sign and date the form in the approving authority's signature block or use an electronic signature.
7. Submit your completed form and all supporting documentation to the CRD for processing (59crdpubspres@us.af.mil). **This should be accomplished no later than 30 days before final clearance is required to publish/present your materials.** If you have any questions or concerns, please contact the 59 CRD/Publications and Presentations Section at 292-7141 for assistance.
8. The 59 CRD/Publications and Presentations Section will route the request form to clinical investigations, 502 ISG/JAC (Ethics Review) and Public Affairs (59 MDW/PA) for review and then forward you a final letter of approval or disapproval.
9. Once your manuscript, poster or presentation has been approved for a one-time public release, you may proceed with your publication or presentation submission activities, as stated on this form. **Note:** For each new release of medical research or technical information as a publication/presentation, a new 59 MDW Form 3039 must be submitted for review and approval.
10. If your manuscript is accepted for scientific publication, please contact the 59 CRD/Publications and Presentations Section at 292-7141. This information is reported to the 59 MDW/CC. All medical research or technical information publications/presentations must be reported to the Defense Technical Information Center (DTIC). See 59 MDWI 41-108, *Presentation and Publication of Medical and Technical Papers*, for additional information.
11. The Joint Ethics Regulation (JER) DoD 5500.07-R, *Standards of Conduct*, provides standards of ethical conduct for all DoD personnel and their interactions with other non-DoD entities, organizations, societies, conferences, etc. Part of the Form 3039 review and approval process includes a legal ethics review to address any potential conflicts related to DoD personnel participating in non-DoD sponsored conferences, professional meetings, publication/presentation disclosures to domestic and foreign audiences, DoD personnel accepting non-DoD contributions, awards, honoraria, gifts, etc. The specific circumstances for your presentation will determine whether a legal review is necessary. **If you (as the author) or your supervisor check "NO" in block 17 of the Form 3039, your research or technical documents will not be forwarded to the 502 ISG/JAC legal office for an ethics review.** To assist you in making this decision about whether to request a legal review, the following examples are provided as a guideline:

For presentations before professional societies and like organizations, the 59 MDW Public Affairs Office (PAO) will provide the needed review to ensure proper disclaimers are included and the subject matter of the presentation does not create any cause for DoD concern.

If the sponsor of a conference or meeting is a DoD entity, an ethics review of your presentation is not required, since the DoD entity is responsible to obtain all approvals for the event.

If the sponsor of a conference or meeting is a non-DoD commercial entity or an entity seeking to do business with the government, then your presentation should have an ethics review.

If your travel is being paid for (in whole or in part) by a non-Federal entity (someone other than the government), a legal ethics review is needed. These requests for legal review should come through the 59 MDW Gifts and Grants Office to 502 ISG/JAC.

If you are receiving an honorarium or payment for speaking, a legal ethics review is required.

If you (as the author) or your supervisor check "YES" in block 17 of the Form 3039, your research or technical documents will be forwarded simultaneously to the 502 ISG/JAC legal office and PAO for review to help reduce turn-around time. If you have any questions regarding legal reviews, please contact the legal office at (210) 671-5795/3365, DSN 473.

**NOTE:** All abstracts, papers, posters, etc., should contain the following disclaimer statement:

***"The views expressed are those of the [author(s)] [presenter(s)] and do not reflect the official views or policy of the Department of Defense or its Components"***

**NOTE:** All abstracts, papers, posters, etc., should contain the following disclaimer statement for research involving humans:

***"The voluntary, fully informed consent of the subjects used in this research was obtained as required by 32 CFR 219 and DODI 3216.02\_AFI 40-402."***

**NOTE:** All abstracts, papers, posters, etc., should contain the following disclaimer statement for research involving animals, as required by AFMAN 40-401\_IP :

***"The experiments reported herein were conducted according to the principles set forth in the National Institute of Health Publication No. 80-23, Guide for the Care and Use of Laboratory Animals and the Animal Welfare Act of 1966, as amended."***



<b>PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS</b>			
1. TO: CLINICAL RESEARCH	2. FROM: (Author's Name, Rank, Grade, Office Symbol) John Hunninghake, O-3, MC, 959 CSPA	3. GME/GHSE STUDENT: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	4. PROTOCOL NUMBER: N/A
5. PROTOCOL TITLE: ( <b>NOTE:</b> For each new release of medical research or technical information as a publication/presentation, a new 59 MDW Form 3039 must be submitted for review and approval.) Case Report			
6. TITLE OF MATERIAL TO BE PUBLISHED OR PRESENTED: First Transatlantic Transport on Extracorporeal Life Support for Hypercapnic Respiratory Failure			
7. FUNDING RECEIVED FOR THIS STUDY? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO FUNDING SOURCE:			
8. DO YOU NEED FUNDING SUPPORT FOR PUBLICATION PURPOSES: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
9. IS THIS MATERIAL CLASSIFIED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
10. IS THIS MATERIAL SUBJECT TO ANY LEGAL RESTRICTIONS FOR PUBLICATION OR PRESENTATION THROUGH A COLLABORATIVE RESEARCH AND DEVELOPMENT AGREEMENT (CRADA), MATERIAL TRANSFER AGREEMENT (MTA), INTELLECTUAL PROPERTY RIGHTS AGREEMENT ETC.? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <b>NOTE:</b> If the answer is YES then attach a copy of the Agreement to the Publications/Presentations Request Form.			
11. MATERIAL IS FOR: <input checked="" type="checkbox"/> DOMESTIC RELEASE <input type="checkbox"/> FOREIGN RELEASE CHECK APPROPRIATE BOX OR BOXES FOR APPROVAL WITH THIS REQUEST. ATTACH COPY OF MATERIAL TO BE PUBLISHED/PRESENTED.			
<input type="checkbox"/> 11a. PUBLICATION/JOURNAL (List intended publication/journal.)			
<input type="checkbox"/> 11b. PUBLISHED ABSTRACT (List intended journal.)			
<input type="checkbox"/> 11c. POSTER (To be demonstrated at meeting: name of meeting, city, state, and date of meeting.)			
<input checked="" type="checkbox"/> 11d. PLATFORM PRESENTATION (At civilian institutions: name of meeting, state, and date of meeting.) 2017 Critical Care Congress (Society of Critical Care Medicine annual meeting), Honolulu HI, 21-25 Jan 2017			
<input type="checkbox"/> 11e. OTHER (Describe: name of meeting, city, state, and date of meeting.)			
12. HAVE YOUR ATTACHED RESEARCH/TECHNICAL MATERIALS BEEN PREVIOUSLY APPROVED TO BE PUBLISHED/PRESENTED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO ASSIGNED FILE # _____ DATE _____			
13. EXPECTED DATE WHEN YOU WILL NEED THE CRD TO SUBMIT YOUR CLEARED PRESENTATION/PUBLICATION TO DTIC <b>NOTE:</b> All publications/presentations are required to be placed in the Defense Technical Information Center (DTIC).			
DATE January 09, 2017			
14. 59 MDW PRIMARY POINT OF CONTACT (Last Name, First Name, M.I., email) Hunninghake, John, C, john.c.hunninghake.mil@mail.mil			15. DUTY PHONE/PAGER NUMBER 210-513-7605
16. AUTHORSHIP AND CO-AUTHOR(S) List in the order they will appear in the manuscript.			
LAST NAME, FIRST NAME AND M.I.	GRADE/RANK	SQUADRON/GROUP/OFFICE SYMBOL	INSTITUTION (If not 59 MDW)
a. Primary/Corresponding Author Hunninghake, John C	0-3	959 CSPA	
b. Skabelund, Andrew J	0-4	59 MDSP/SGMSP	
c. Hagedorn, Scott	CIVILIAN	CIVILIAN	CIVILIAN
d. Cannon, Jeremy	CIVILIAN	CIVILIAN	CIVILIAN
e.			
17. IS A 502 ISG/JAC ETHICS REVIEW REQUIRED (JER DOD 5500.07-R)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
I CERTIFY ANY HUMAN OR ANIMAL RESEARCH RELATED STUDIES WERE APPROVED AND PERFORMED IN STRICT ACCORDANCE WITH 32 CFR 219, AFMAN 40-401_IP, AND 59 MDWI 41-108. I HAVE READ THE FINAL VERSION OF THE ATTACHED MATERIAL AND CERTIFY THAT IT IS AN ACCURATE MANUSCRIPT FOR PUBLICATION AND/OR PRESENTATION.			
18. AUTHOR'S PRINTED NAME, RANK, GRADE John Hunninghake, O-3, MC		19. AUTHOR'S SIGNATURE HUNNINGHAKE JOHN.C.1268153108	20. DATE December 05, 2016
21. APPROVING AUTHORITY'S PRINTED NAME, RANK, TITLE Edward McCann, O-4, MC, Pulmonary Fellowship Program Director		22. APPROVING AUTHORITY'S SIGNATURE MCCANN.EDWARD.T.1244108845	23. DATE December 08, 2016

<b>PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS</b>		
<b>1st ENDORSEMENT (59 MDW/SGVU Use Only)</b>		
TO: Clinical Research Division 59 MDW/CRD Contact 292-7141 for email instructions.	24. DATE RECEIVED December 12, 2016	25. ASSIGNED PROCESSING REQUEST FILE NUMBER 17013
26. DATE REVIEWED December 27, 2016		27. DATE FORWARDED TO 502 ISG/JAC
28. AUTHOR CONTACTED FOR RECOMMENDED OR NECESSARY CHANGES: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES If yes, give date. _____ <input type="checkbox"/> N/A		
29. COMMENTS <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED Case study presentation of prolonged ECLS transfer. Appropriate disclaimers included and no COI noted.		
30. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER Kevin Kupferer/GS13/Human Research Subject Protection Expert	31. REVIEWER SIGNATURE KUPFERER.KEVIN.R.1086667270 <small>Digitaly signed by KUPFERER.KEVIN.R.1086667270              DN: cn=KUPFERER.KEVIN.R.1086667270, o=USAF, ou=USAF, email=KUPFERER.KEVIN.R.1086667270, Date: 2016.12.27 16:13:43 -0500</small>	
		32. DATE December 27, 2016
<b>2nd ENDORSEMENT (502 ISG/JAC Use Only)</b>		
33. DATE RECEIVED		34. DATE FORWARDED TO 59 MDW/PA
35. COMMENTS <input type="checkbox"/> APPROVED (In compliance with security and policy review directives.) <input type="checkbox"/> DISAPPROVED		
36. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER	37. REVIEWER SIGNATURE	
		38. DATE
<b>3rd ENDORSEMENT (59 MDW/PA Use Only)</b>		
39. DATE RECEIVED January 03, 2017		40. DATE FORWARDED TO 59 MDW/SGVU January 04, 2017
41. COMMENTS <input checked="" type="checkbox"/> APPROVED (In compliance with security and policy review directives.) <input type="checkbox"/> DISAPPROVED		
42. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER Kevin Iinuma, SSgt/E-5, 59 MDW Public Affairs	43. REVIEWER SIGNATURE IINUMA.KEVIN.MITSUGU.1296227 613 <small>Digitaly signed by IINUMA.KEVIN.MITSUGU.1296227613              DN: cn=IINUMA.KEVIN.MITSUGU.1296227613, o=USAF, ou=USAF, email=IINUMA.KEVIN.MITSUGU.1296227613, Date: 2017.01.04 16:34:38 -0500</small>	
		44. DATE January 04, 2017
<b>4th ENDORSEMENT (59 MDW/SGVU Use Only)</b>		
45. DATE RECEIVED		46. SENIOR AUTHOR NOTIFIED BY PHONE OF APPROVAL OR DISAPPROVAL <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> COULD NOT BE REACHED <input type="checkbox"/> LEFT MESSAGE
47. COMMENTS <input type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED		
48. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER	49. REVIEWER SIGNATURE	
		50. DATE



## **FIRST TRANSATLANTIC TRANSPORT ON EXTRACORPOREAL LIFE SUPPORT FOR HYPERCAPNEIC RESPIRATORY FAILURE**

John Hunninghake, Andrew Skabelund, Scott Hagedorn, Jeremy Cannon

When conventional ventilation is unsuccessful, extra corporeal life support (ECLS) can be used to provide total lung support to patients who require adjunctive oxygenation (ECMO) or removal of excess carbon dioxide (ECCOR). Numerous reports have documented air transport of patients on ECLS, but flight times are usually <3 hours. We report the first documented case of a successful transatlantic transport of an adult patient on ECLS for hypercapneic respiratory failure in the initial stages of her prolonged clinical course to lung transplantation. The patient is a 31-year-old non-smoking female with a yearlong history of worsening cough and exertional dyspnea who developed acute hypercapneic respiratory failure. After failed attempts on a conventional ventilator, she was placed on venovenous ECLS. Weaning attempts were unsuccessful due to a rapid rise in her PaCO<sub>2</sub> upon removal of the circuit. On ECLS day 10, she was transported by a US Air Force Critical Care Air Transport Team from Germany to a military treatment facility in Texas. The entire transport process was nearly 24 hours and 8600 km. After failed attempts to wean from ECLS again due to PaCO<sub>2</sub> retention, a lung transplantation evaluation was initiated on ECLS day 23. While on ECLS, she her physical and nutritional status significant improved with daily physical therapy. After 90 days on ECLS, the patient had gained 6 kg and could walk almost a mile on the treadmill. On ECLS day 94, the patient underwent an uncomplicated bilateral lung transplant. Pathology of the explanted lungs was consistent with a rare case of late-stage diffuse panbronchiolitis. This case is unique for multiple reasons: the first successful transatlantic transport of an adult patient on ECLS over a remarkable distance and time duration; the successful use of ECLS for hypercapneic respiratory failure; and the use of an ECLS bridge for this patient to gain the physical and nutritional reserve required to tolerate her lung transplantation, which would not have been feasible if she had been on a conventional ventilator.

*"The views expressed are those of the author(s) and do not reflect the official views or policy of the Department of Defense or its Components."*